Appl. No. 09/697,088
Amdt. sent September 1, 2004
Amendment under 37 CFR 1.116 Expedited Procedure
Examining Group

PATENT

REMARKS/ARGUMENTS

Claims 18 - 36 are pending.

An objection to claim 24 was raised in connection with a spelling error. In response, claim 24 has been amended to make the correction.

Claims 18-20, 23-27, 29-31, and 34-35 were rejected under 35 U.S.C. 102(e) for allegedly being anticipated by Gagne et al., U.S. Patent No. 6,401,178.

Claims 21-22, 28, 32-33, and 36 were rejected under 35 U.S.C. 103(a) for allegedly being unpatentable over Gagne et al. in view of Misinai et al., U.S. Patent No. 5,758,125.

The claims as previously presented are believed to be allowable over the cited art. Therefore, the claims have not been amended. Reconsideration of the claims in view of the following remarks is respectfully requested.

The present invention is directed to storage systems. Aspects of the present invention are recited in independent claim 18. For example, claim 18 recites a method involving "forming a duplex state between said first disk unit and said second disk unit" so that write operations to the first disk unit from a first computer are mirrored to the second disk unit. Claim 18 further recites "forming a simplex state" where the mirror operation is no longer performed. Subsequent to forming the simplex state, claim 18 recites "re-mapping a disk identifier." The disk identifier is used by a second computer to access storage. As recited in claim 18, the "disk identifier is associated with [a] third disk unit before said re-mapping and said disk identifier is associated with said second disk unit after said re-mapping." Consequently, the second computer accesses the third disk unit prior to the re-mapping, and accesses the second disk unit subsequent to the re-mapping.

Gagne et al. was cited for showing the present invention. A distinction between Gagne et al. and the present invention as recited in claim 18 is that Gagne et al. do not show "re-mapping a disk identifier" as recited in claim 18. Gagne et al. disclose a system shown in Fig. 1 having a standard storage volume (31), a BCV volume (33), and another BCV volume (35). Kindly refer generally to column 4, line 22 and following for a description of Fig. 1.

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Applications (22 to 24) running on a plurality of host devices access the storage volumes. For example, Host App (22) operates with the standard device (31), Host App (23) operates with BCV device (33), and Host App (24) operates with BCV device (35). *Col. 6, lines 22 - 26. See also Fig. 10, events 230 - 231 and col. 13, lines 8 - 33.*

Data in the standard device (31) can be copied to one of the BCV devices (33, 35) in an operation generally referred to as data mirroring. Gagne et al. describe an ESTABLISH command which initiates data mirroring, beginning at column 7, line 8 and shown in Fig. 4. This involves selecting one of the BCV devices and isolating the BCV device from the program operating with it. "More specifically, step 106 [in Fig. 4] selects and adds the corresponding BCV device as a BCV mirror ... . Further communications between the BCV device and the program operating with it are no longer possible so step 107 discards all WRITE PENDING operations to the selected BCV device. Step 108 completes the isolation by setting to a NOT READY (NR) the selected BCV device in its function as a storage facility for a corresponding application." *Col. 7, lines 55 - 65.* Then a subsequent SPLIT command can then reconnect "the BCV device to its corresponding application." *Col. 8, line 27 - 28.* In particular, "the SPLIT command will isolate the standard and BCV devices 31 and 33 and reconnect the device 33 with the replicated data set to the HOST APP B application 23." *Id. at lines 32 - 34.* Step 127 in Fig. 5 shows that the "the device controller associated with the selected BCV device removes the BCV mirror from the standard device and reassigns it to its original BCV application, such as the HOST APP B application 23 for the BCV(1) device 33." *Id. at lines 51 - 54.*

There does not appear to be any discussion regarding a "re-mapping" operation where Host App (23) communicates with another storage unit when an ESTABLISH command is carried out. In fact, it seems that the Host App (23) simply waits until it is reconnected to its associated storage unit (i.e., BCV device 33) when the SPLIT command is performed. It is earnestly submitted that Gagne et al. do not show this aspect of the present invention, and so the Section 102 rejection of the claims is overcome.

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CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

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